

REMARKS

In reply to the Office Action of May 22, 2008, Applicant submits the following remarks. Claims 1-7, 9-11, 13, 15-23 and 25 have been amended. Support for the amendment to claim 1 can be found at least in claims 8 and 14 as previously pending. Claim 1 has also been amended to distinguish the first electrode from the second electrodes and the first and second conductive films. Claim 16 has been amended to distinguish the lower electrode from the upper electrodes and the first conductive layer from the second conductive layer and to read, “a plurality of insulating members *each* comprising a valley”, which is supported by Figure 1d and the accompanying text in the specification. Claims 2-7, 10-11, 13, 15, 17-18 and 20-22 and 25 have been amended to conform with the claims from which they depend. Claim 2 has also been amended to add, “to form lower stripe-like electrodes”. Claims 15 and 21-22 have also been amended to correct typographical errors. Claim 19 has been amended to recite that the “insulating members form structures that comprise portions of the electroluminescent medium” and thereby clarify the claim language. Claim 23 has been amended to further describe the “U” orientation. Claims 8 and 14 are canceled. Applicant respectfully requests reconsideration in view of the foregoing amendments and these remarks.

The Rejections

Independent claims 1 and 16 are rejected as being allegedly anticipated by U.S. Patent No. 6,117,529 (“Leising”). The remaining claims are rejected as either anticipated by Leising or being allegedly obvious over Leising in view of one or more of U.S. Patent Pub. 2006/0105492 (“Veres”), U.S. Patent Pub. 2005/0009227 (“Xiao”), U.S. Patent Pub. 2003/0129297 (“Jakobi”), U.S. Patent Pub. 2004/0062857 (“Nagayama”), U.S. Patent Pub. 2002/0163300 (“Duineveld”), U.S. Patent No. 6,739,931 (“Yamazaki”), U.S. Patent Pub. 2003/0234398 (“Aoki”), or U.S. Patent Pub. 2004/0135151 (“Okamoto”). The applicant respectfully traverses in light of the amendments to claims 1 and 16.

Claim 1

Amended claim 1 is directed to a method for manufacturing an organic electroluminescent device. The method includes arranging an electrode on a substrate, the electrode being made of a conductive film to form a subassembly, forming a plurality of insulating ribs on the electrode, forming a conductive film over an organic layer on the subassembly and removing a portion of the conductive film using a radiation method to create electrodes that are electrically isolated from each other, wherein removing the portion of the conductive film includes removing a portion of the conductive film from over the insulating ribs and removing at least a portion of the insulating ribs.

Leising describes a method of forming an organic electroluminescent device, where the method includes forming a base electrode layer 2 with insulating material 27 as parallel stripes over the base electrode layer 2 (FIGS. 31-33, col. 18, lines 8-18). Electroluminescent layer 3 is over the base electrode layer 2 and insulating material 27. A cover electrode 6 is subsequently placed perpendicular to stripes of electrode layer 2. FIGS. 31 and 33 are reproduced below for the Examiner's convenience.

FIG. 31

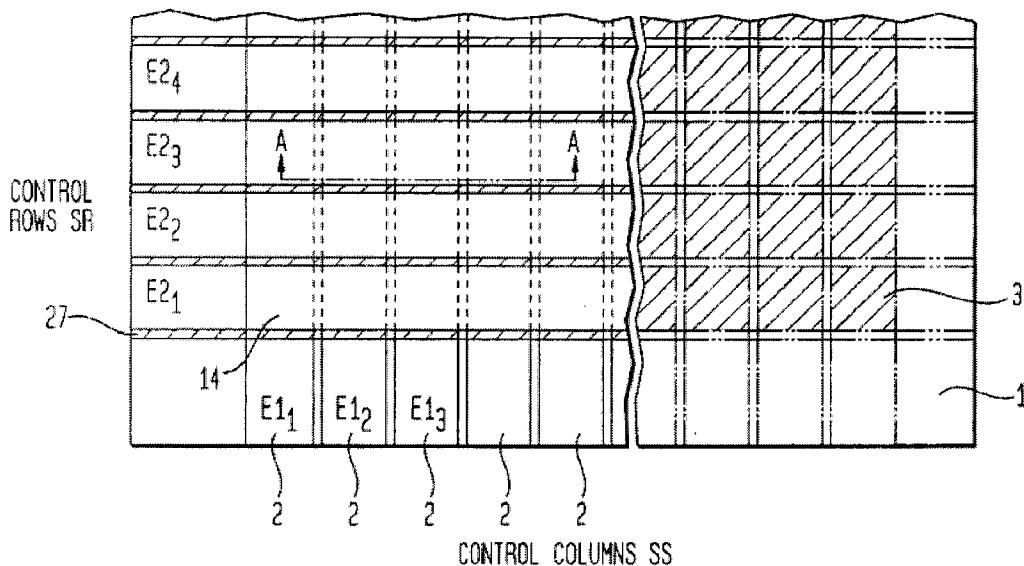
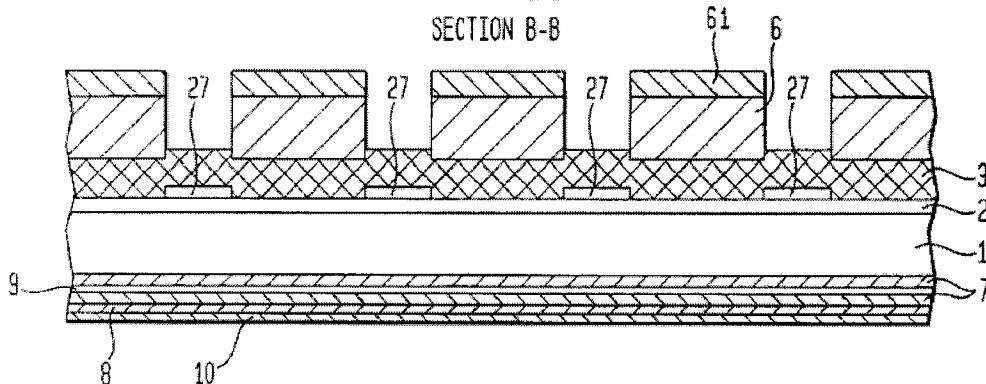


FIG. 33

SECTION B-B

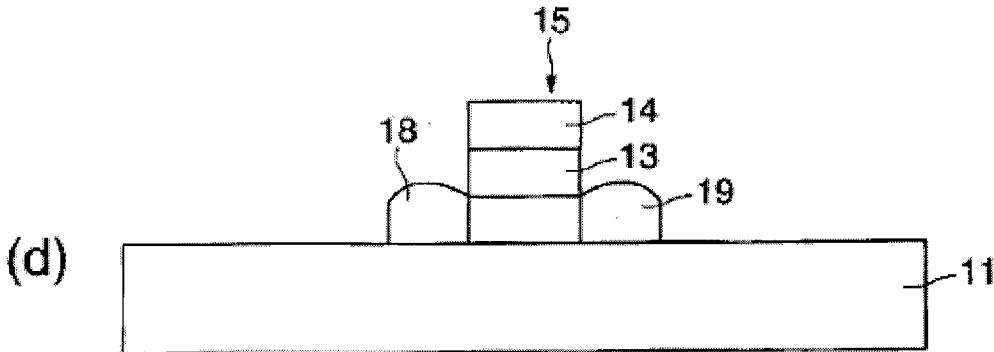


Amended claim 1 is not anticipated by Leising because Leising fails to suggest or disclose removing the portion of a conductive film that is over an organic layer, including removing a portion of the conductive film from over insulating ribs and removing a portion of the insulating ribs. Leising forms a base electrode layer 2 and an insulating layer 27 in stripes. After the formation of these two layers of striped material, an electroluminescent layer 3 is formed, which covers both the stripes of base electrode layer 2 and the insulating layer 27. Cover electrodes 6 are then formed over the electroluminescent layer 3. In a cross sectional view of the device (FIG. 33), the cover electrodes 6 are above and between insulating layer 27. In between the stripes of cover electrode 6 and above the insulating layer 27 there is electroluminescent layer 3. Leising does not show removing any of the stripes of insulating layer 27, rather these are covered by the electroluminescent layer 3. Thus, Leising does not teach removing a portion of a conductive film, which includes removing a portion of the conductive film from over the insulating ribs and removing at least a portion of the insulating ribs.

Previously pending claim 14, the subject matter of which is now in amended claim 1, was rejected as obvious over Leising in view of Aoki.

Aoki describes thin film transistors (paragraph 2). A transistor includes layers of semiconductor material, a gate, source and drain electrodes (paragraph 4). An insulating film 13 is between the gate electrode 14 and a semiconductor film 12 layer, where the gate electrode 14, insulating film 13 and semiconductor film 12 are on a substrate 11 (Abstract, cover figure). A

source electrode 18 and drain electrode 19 are on either side of the gate structure (items 12, 13 and 14). Aoki's cover figure (d) is reproduced below for the Examiner's convenience.



Applicant submits that Aoki is not analogous art for the purpose of rejecting amended claim 1. MPEP 2141.01(a) notes that "Under the correct analysis, any need or problem known in the field of endeavor at the time of the invention and addressed by the patent [or application at issue] can provide a reason for combining the elements in the manner claimed." *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 USPQ2d 1385, 1397 (2007). Thus a reference in a field different from that of applicant's endeavor may be reasonably pertinent if it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his or her invention as a whole. Section II instructs the Examiner to consider the similarities and differences in *structure and function* when determining whether art is analogous.

Aoki's device is semiconductor based thin film transistor device and not an organic electroluminescent device (OLED). The configuration and materials used in a transistor are very different from a passive OLED device. The layer sequence of a transistor is different from the layer sequence of an OLED, that is, the structure is different. Specifically, a transistor is formed of semiconductor materials with a gate between a source and drain, where all three are on a substrate. A passive OLED device, such as Leising's device, typically has base and cover electrodes that are perpendicular to one another with electroluminescent material therebetween. The operation of the devices differs as well. In a lighting type OLED device, when a bias is applied across the electrodes, electrons and holes are pushed through the electroluminescent

material to cause recombination in the electroluminescent material, which in turn causes light emission. The transistor can be turned on or off by applying a charge to the gate, which allows charge to flow (or prevents charge from flowing) through a channel layer in the substrate. Because the structure and operation of the transistor is different from a passive OLED, a person of skill in the art would not turn to the teachings of Aoki to modify the structure shown by Leising. Moreover, the Examiner argues that it would have been obvious to "provide a device that minimizes short circuiting between the source and drain region and the gate electrode." (office action, page 13). However, Leising's OLED does not have a source, drain or gate electrode. There is no need to reduce shorting between elements that are non-existent. Thus, applicant submits that a proper obviousness rejection has not been made with respect to claim 1 as amended.

For at least these reasons, applicant submits that claim 1 as amended is not anticipated by Leising nor are there any pending *prima facie* obviousness rejections of claim 1 as amended. Claims 2-7, 9-13 and 15 depend from claim 1 and are similarly not anticipated or obvious as argued by the Examiner in the office action.

Claim 16

Amended claim 16 is directed to an organic electro-luminescent device having a plurality of insulating members each comprising a valley and consisting at least partially of an insulating material and arranged on the electrode.

The Examiner points to FIG. 4 and col. 6, lines 59-62 of Leising as teaching a plurality of insulating members comprising a valley. Leising teaches that electrically insulating material is applied in parallel stripes (col. 6, lines 59-62). While Leising may arguably describe stripes of insulating material with valleys therebetween, Leising does not teach that *each* of the stripes includes a valley. Applicant has amended the claim language to clarify that each insulating member has a valley, regardless of whether there is a valley between insulating members. In light of the amendment to claim 16, applicant submits that claim 16 is not anticipated by Leising. Similarly, none of the claims that depend from claim 16 are anticipated by Leising.

Claims 19 and 23-25 were rejected over Leising in view of Duineveld alone or in combination with Yamazaki. Applicant respectfully disagrees in light of the amendment made to claim 16. Each of Leising, Duineveld and Yamazaki fail to suggest or disclose insulating members each comprising a valley.

Claim 23 has been amended to clarify the orientation of the "U", specifically, "wherein the insulating member is in the shape of a 'U' and a base of the 'U' is closer to the electrode than ends of legs of the 'U'".

Yamazaki describes insulating film 201 with a rounded cross section, where a bottom flat portion 204 is the wide flat portion (FIG. 20B, col. 3, lines 20-30).

Duineveld describes a bumps 15 with rounded edges to reduce the risk that the second electrodes 11 are unintentionally electrically insulating when crossing a bump 15 (FIG. 4, paragraph 118). FIG. 4 has been reproduced herein for the Examiner's convenience.

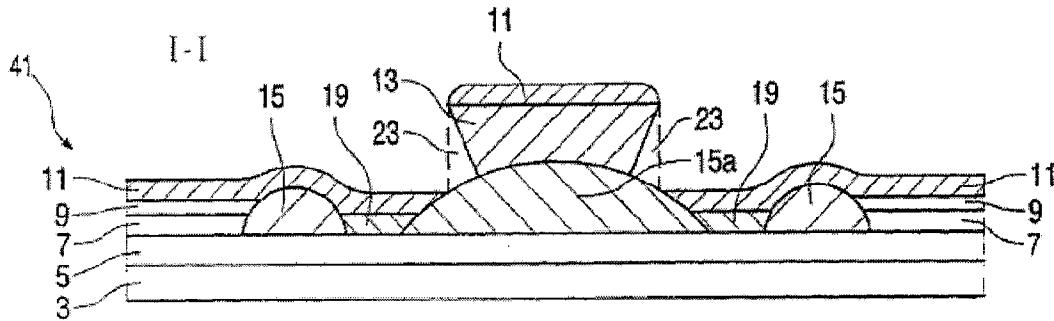


FIG. 4

In addition to not describing insulating members each comprising a valley, Duineveld and Yamazaki fail to suggest or disclose that the insulating member is in the shape of a "U" and a base of the "U" is closer to the electrode than ends of legs of the "U". Rather, Duineveld describes bumps 15 that are half circles with a flat portion adjacent to a substrate.

For these additional reasons, there is no *prima facie* case of obviousness for claim 16 or the claims that depend therefrom using the combination of Leising, Duineveld and Yamazaki.

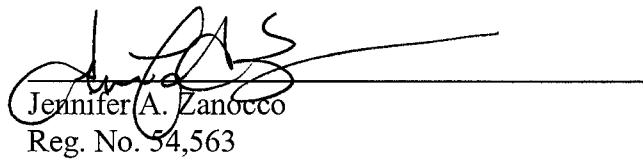
Applicant : Guenther et al.
Serial No. : 10/569,818
Filed : November 1, 2006
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Attorney's Docket No.: 12406-063US1 / P2003,0550
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No fee is believed to be due. If, however, there are any charges or credits, please apply them to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 8/19/08



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